

THE TRANSPORTATION SITUATION IN THE USSR

AND EASTERN EUROPEAN SATELLITES

I. Introduction

The transportation capabilities of the Sino-Soviet Bloc have generally been commensurate with the requirements placed upon them. Annual freight traffic plans have usually been fulfilled, and often surpassed. It has been common Bloc practice to substitute transport inputs in the form of longer hauls for capital inputs which have been behind schedule. The ability of the transport system to absorb such demands indicates an element of excess capacity as well as considerable flexibility. The degree of utilization of railroad capacity in the Bloc is much higher, however, than exists in Western Countries.

The principal transport problem of the Bloc, left to its own transport devices, is the problem of supply of Communist China and the Soviet Far East. The Trans-Siberian Railroad and its connections to China are now compelled to carry heavy tonnages for this supply at very high cost compared to waterborne movement of the same goods. This problem is being attacked on two fronts: (1) a rapid increase in the production and equipment of dry and liquid cargo vessels employing both Bloc and Western Yards, and (2) the construction of another overland connection between the USSR and Communist China using a portion of the South-Siberian Railroad as the Soviet main-line link.

Inland freight traffic, predominantly by rail in the Bloc, increased 65 percent in the European Satellites from 1950 to 1955 in terms of ton-kilometers and 64 percent in the USSR. Comparable gains in Western Europe and in the US were, respectively 26 percent and 20 percent. In 1955 the railroads carried 90 percent of the total ton-kilometers of inland freight in the European satellites, and 83 percent in the USSR. The share of the railroads in the US was only 49 percent.

Truck transportation in the Bloc consists largely of local cartage and short hauls from farm to market. Inland waterways, ocean shipping, pipelines, and civil air transportation facilities in the Bloc are less comprehensive and less well-developed than in the West although modern equipment is presently being installed and the systems expanded. Bloc management is constantly striving, moreover, to achieve coordination in the utilization of the various transport media and to reduce the degree of dependence on the railroads.

The fact that the Bloc transportation system operates at near capacity contains an element of weakness as well as one of economical practice. Constant annual increases in traffic, relatively low levels of capital input, and pressure to obtain high levels of operational output reduce the flexibility of the system, particularly its ability to accommodate sudden large increases in traffic.

Another factor of weakness in the transportation system of the Bloc is the difference in the gauge of the USSR railroads (5'0") and those of the European Satellites (4'8 1/2") and China (4'8 1/2"). This serves to delay not only the international exchange of goods, but also the provision of logistic support to the military. The transloading of rail shipments at border points between the USSR and other Bloc countries, twice between the European Satellites and China, is both costly and time-consuming.

II. Railroads

A. USSR

The length of the railroads in operation in the USSR at the end of 1956 is estimated to have been 121,600 route kilometers, an increase of approximately 900 route-kilometers above that in 1955. An estimated 5 percent, or about 6,000 route-kilometers were electrified at the end of 1955. Construction of new lines in 1956 was directed primarily toward the Central Siberian network in support of the agricultural and industrial development of that area.

In 1956 the railroads of the USSR attained a level of ton-kilometer performance 80 percent above that of 1950. Freight traffic output of the USSR exceeded US railroad output by 14 percent in 1956. Plans for 1960 call for an increase of 27 percent over the 1956 level in the USSR. This growth has been maintained through intensive utilization of rail facilities and equipment. However, insufficient attention has been given to the adoption of modern motive power and improved signalling facilities and other traffic control mechanisms. In spite of this, the railroads of the USSR have been able to perform adequately those services required by the economy and transportation has not been a hindrance to the economic growth of the country.

Continued growth in the output of Soviet railroads can be maintained only through the adoption of newer types of motive power and important technological innovations in signalling, communications, and other aspects of railroad operation. The substantial capital investment required for this new technology is, in fact, in the process of being realized. Extensive investment in dieselization and electrification during the 1956-60 period is the greatest improvement being effected. In connection with the program, sidings are being lengthened, yards expanded, new repair facilities built, signalling modernized, track and roadbed strengthened, and larger modern freight cars built.

B. European Satellites

Railroad construction efforts in the European Satellites during 1951-55 were directed primarily toward improving and modernizing existing facilities rather than toward building new railroad lines. The main emphasis in new construction was toward building

lines to bypass capital cities so as to speed the flow of traffic. Among the other railroad developments were the completion of several large international bridges, the electrification of several railroad lines, the expansion of yards and stations, and the installation of improved signal and communication facilities.

Transportation systems in the European Satellites achieved substantial growth in freight traffic during 1951-55. Although performance data indicate that there has been a slight diversion of traffic from the railroads to other forms of inland transportation, rail transport still carries the great bulk of internal commerce and remains by far the most important inland freight carrier in the area.

Investment in the transport sector, which had been high in the immediate post-World War II years, was small during 1951-55 relative to the increase in freight traffic performance. The impressive achievements in traffic performance were made possible in large part by increasing the intensity of utilization of equipment and facilities - that is, through improving operating efficiency. There are many indications that the Satellite transportation systems have found it difficult to handle steadily increasing traffic demands and that shortages of transportation may have, in a few instances, retarded scheduled economic growth.

As in the case of the First Five Year Plans, investments in rail transport under the Second Five Year Plans in the European Satellites are to be of an intensive rather than an extensive nature, geared primarily toward improving and modernizing rather than extending railroad facilities. An outstanding feature of the new Satellite plans for rail transport is the provision for the beginning of a changeover from steam to electric and diesel motive power. Diesel and electric locomotives, which handled only an insignificant volume of traffic in 1955, are to account for 18 percent of total rail traffic in 1960.

In spite of plans for increased investment the European Satellites apparently intend to continue policies of operating at near capacity in the 1956-60 plan period. Consequently, the economies of these countries will probably continue to be plagued with recurring local transportation difficulties of a temporary nature similar to those being experienced at present.

III. Highways

A. USSR

The length of the highway network of the USSR is estimated at approximately 1.53 million kilometers as of the end of 1955. Only 13 percent of the network consisted of hard surface, all-weather roads. A large part of the new construction in 1956 was confined to the area of the New Lands, and some emphasis was given to roads in industrial areas of European USSR. It is probable that physical expansion of the highway net will continue at a slow pace, since there has been little demand for intercity roads, due

mainly to the high cost of long-haul motor traffic relative to rail and water. Emphasis on new road construction for the next several years will probably be placed upon short feeder roads to support rail and water carriers.

In 1956 highway transport accounted for only 3.8 percent of total freight traffic volume in terms of ton-kilometers. This will probably increase to 4.8 percent of the total by 1960. Most of this will continue to be short-haul traffic in support of other carriers.

B. European Satellites

Road construction activity in the European Satellites during 1951-55 consisted largely of maintenance and improvement of existing roads rather than extensive building of new highways. An increase in the share of highway transport in total inland traffic from 3.3 percent in 1950 to 4.6 percent in 1955 reflects the development of that carrier as a feeder service for the railroads rather than as a long-distance, competitive form of transportation. Although motor vehicle inventories were expanded in all of the Satellite countries, growth in the Satellite truck park since 1950 has not kept pace with the 96-percent increase shown in Western Europe in 1950-55.

Following the same general pattern as that for railroad construction, investments in road construction under the Second Five Year Plans in the European Satellites are to be directed primarily toward modernizing the existing road net. Increases in truck inventories are planned, but these appear to be modest in comparison with planned traffic increases. Fulfillment of highway traffic plans thus will apparently depend upon more effective utilization of equipment to an even larger degree than will fulfillment of railroad traffic plans.

IV. Inland Waterways

A. USSR

The inland waterway system of the USSR is estimated to have consisted of 132,000 kilometers of navigable rivers, canals, and routes on inland seas in 1955. While little was invested for network expansion in 1956, considerable effort was expended on channel and port facility improvements. The most important future changes in the inland water system will result from the construction of an extensive series of dams on many of the major rivers. Completion of these dams will improve service by raising the water level, thus permitting larger, more efficient craft to operate.

Future plans for inland waterway transport are apparently to be directed largely toward fleet expansion, mechanization of cargo handling, and port improvements. Many of the port improvements will be required by the changed water levels of new reservoirs. These efforts are intended to improve vessel availability, increase reliability of scheduled movements, and reduce excessive demurrage in port.

B. European Satellites

In spite of rather ambitious plans, the expansion of inland water facilities in the European Satellites since 1950 has been negligible. Work on the waterways themselves has been restricted largely to maintenance rather than improvement or expansion of the existing network. The share of inland water transport in total traffic increased slightly, from 4.9 to 5.1 percent during 1950-55, but remained far below the 11.0 percent share which it had in 1938.

Plans for inland water transportation in the Satellites indicate that relatively little attention is to be devoted to developing this form of transportation in the Second Five Year Plans. Principal emphasis appears to be directed toward expanding and modernizing fleets and improving port loading and unloading facilities. Fleet inventory data announced in the Second Five Year Plans do not permit statistical comparison of planned traffic and fleet increases. It is believed, however, that planned increases in fleet inventories are modest relative to planned traffic increases.